

THE INVENTION. As demonstrated in the present specification, the meat products of this invention decrease total plasma-cholesterol and plasma-triglyceride levels and increase plasma-HDL-cholesterol levels in humans upon consumption of the meat products. More specifically, as described in lines 1 through 24 on page 12 of the specification, volunteers consumed a diet 110% and 120-130% **higher** in energy and fat than necessary for adequate daily intake. Even under these conditions, **total plasma-cholesterol and plasma-triglyceride levels actually decreased and plasma HDL cholesterol level increased.** See Figs. 1-3. This shows that the meat products of the present invention effectively **improve** plasma-cholesterol levels **even upon consumption of excessive energy and animal fat.**

GIESE. Claims 3, 4, 7, 10-13, 16, and 17 are rejected under 35 U.S.C. §103 as being unpatentable over Giese. **This rejection is respectfully traversed.**

The Examiner contends:

Although Test variable 1 in Tables 6 and 7 shows improved cholesterol lowering results as compared with Test variables 2 and 3 in Tables 6 and 7, as applicant contends, neither Test variable 2 nor 3 includes soy protein, as claimed by applicant and disclosed by both primary references.

Applicants respectfully disagree.

Cholesterol in meat products is mainly derived from animal fat.

just The cholesterol content in the test variables described in Table 6 fall in the order of test variable 3 (animal fat only) > test variable 1 (animal fat + vegetable oil) > test variable 2 (vegetable oil only). In contrast, as shown in Table 7, plasma-cholesterol levels of rats fed test variables 1-3 fall in the order of test variable 3 (animal fat only) > test variable 2 (vegetable oil only) > test variable 1 (animal fat + vegetable oil).

product is not The plasma-cholesterol levels of rats fed Test variable 1 are lower than those of rats fed test variables 2 and 3. In other words, *on human* test variable 1 suppresses plasma-cholesterol levels in rats most effectively. This fact is synergistic for the following two reasons:

1. Cholesterol content in diets were reduced using vegetable oil with animal fat together, and the cholesterol intakes of rats were effectively reduced.

2. Plasma-cholesterol levels decreased by virtue of the action of the vegetable protein.

human Increasing the amount of vegetable oil in place of animal fat clearly reduces cholesterol content in diets. However, animal fat is often indispensable for favorable texture and flavor in meat products. See, for example, Giese, at page 100, right column, lines

5-7. Increasing the vegetable oil content in meat results in loss of favorable texture and flavor such that the meat products are no longer acceptable to the consumer.

To overcome these problems, the present invention adjusts the ratio of vegetable oil and animal fat in meat products to approximately 1:1 in order to decrease plasma-cholesterol levels and to satisfy consumer acceptability. The present inventors did so not out of some nebulous inclination to see what happens, but specifically to reduce plasma-cholesterol levels.

Accordingly, reconsideration and withdrawal are requested of the rejection over Giese.

Claims 3, 4, 7, 10-13, 16, and 17 are rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,164,213 to Bonkowski in view of U.S. Patent No. 5,309,204 to Helmer et al.

This rejection is respectfully traversed.

Bonkowski shows utilization of soy protein in meat products and reduction of their cholesterol contents, but does not disclose any cholesterol-level suppression property *in vivo*. Similarly, Helmer shows utilization of vegetable oil in comminuted meat products to prevent fat cap and emulsion breakdown, but the reference does not

disclose any cholesterol-level suppression property *in vivo*. Moreover, the ratios of vegetable oil v. animal fat shown by Helmer are much beyond those contemplated by the present invention.

Accordingly, reconsideration and withdrawal are requested of the rejection over Bonkowski in view of Helmer.

In summary, it is reiterated that the present invention effectively improves the plasma-cholesterol levels upon consumption, even of excessive energy and animal fat, a benefit that is neither taught nor suggested by the references of record.

Conclusion

It is believed that this is a full and complete response to the Office Action and that the application is in condition for allowance. In the event of any unforeseen issues, however, the Examiner is invited to telephone Richard Gallagher (Reg. No. 28,781) at (703) 205-8008.

Pursuant to 37 C.F.R. §§1.17 and 1.136(a), applicants respectfully request a three-month extension of time for filing a reply in the present application, and the required fee of \$920 is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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